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CONSIDERATION OF THE COUNTRY PRESENTATIONS IN THE LIGHT OF A CROSS-COUNTRY REVIEW BY THE SECRETARIAT OF THE DESIGN, IMPLEMENTATION AND RESULTS OF PRIVATIZATION PROGRAMMES

Issues relating to (a) privatization and the environment and (b) the privatization of pension funds

Note by the UNCTAD secretariat

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INTRODUCTION

1. This note discusses issues relating to two topics that were raised at the third session of the Ad Hoc Working Group, namely (a) privatization and the environment and (b) the privatization of pension funds. It is intended to serve as an aid for discussion by the Ad Hoc Working Group at its fourth session rather than as a full treatment of the issues.

I. PRIVATIZATION AND THE ENVIRONMENT

A. Introduction

2. Privatization raises a number of important issues concerning the environment and sustainable development. Some of these issues, relating to the environmental management or impact of privatization, are included in a number of country presentations submitted to the Ad Hoc Working Group. Further, a paper prepared by a research institute (Rogaland Research) in Norway and submitted by the Government of Norway to the Ad Hoc Working Group at its third session raises a number of issues with regard to environmental management and the relationship of privatization to growth and the environment. 1/ This brief note attempts to bring together some of the main issues under the aspects of the impact of privatization on the environment and of the environmental management of privatization.

B. Impact of privatization on the environment

3. Privatization can have an impact on the environment in a number of ways: for example, by creating industrial and market structures which attract foreign investment and technology, including environmentally sound technology; by creating competitive market structures which provide incentives for innovation and efficiency, including incentives to improve production processes and to produce products which are environmentally friendly, and which allow market-based instruments of environmental regulation to operate efficiently; and by forcing infrastructure services to align the prices of their outputs to their real costs and thus to cut out wasteful consumption and pollution due to underpricing.

4. The primary objective of privatization which is broadly shared by Governments is to promote competition and economic efficiency. Competition is in fact central to the success of privatization. One of the major lessons learned from privatization experiences is that, while ownership often matters, competition matters even more. This is true of public utilities, where pro-competition regulation is an important aspect of utility regulation, as it is true of competitive markets. Thus, where privatization contributes to competition and economic efficiency - and there is some evidence from the country presentations submitted to the Ad Hoc Working Group and other studies that privatization programmes in a number of countries have achieved efficiency gains in terms of increased competition and lower consumer prices 2/ - it can also contribute to eco-efficiency. Broadly speaking, eco-efficiency means production and consumption structures which minimize resource use and pollution per unit of output. In a technical sense, it means

ecological or "full-cost pricing", i.e. pricing of economic transactions or goods in a way which reflects or "internalizes" environmental externalities. 3/

5. In practice, whether privatization promotes eco-efficiency, for example by reducing pollution, can only be verified by reference to the evidence. There is, however, a "circumstantial case", as the World Bank puts it, that privatization is beneficial for the environment. To put it simply, public enterprises tend to pollute more because they use old technology, they often receive protection and they can more easily avoid compliance with pollution controls or get exemptions from pollution regulations. However, private enterprises can also increase pollution, because they may be more inclined to undertake polluting activities where profits are important, to bribe regulators or to hide information from them. 4/ In the final analysis, whether ownership matters depends on the manner in which competition and environmental regulation and pressure operate on public or private ownership. In this regard, reference may be made to a case study cited by the Norwegian paper of 26 pulp and paper plants in Bangladesh, India, Indonesia, and Thailand. The study explicitly deals with the relationship between ownership and pollution at the micro level. 5/ According to the study, the factors that are positively related to environmentally benign management are competitiveness, rural location of the plants (perhaps because the source of pollution is easier to identify than in urban areas) and the standard of living of the country. It concludes that ownership in itself does not seem to have any impact on pollution control. However, as most of the public enterprises were the least competitive, they also had less pollution control.

6. In theory, privatization, by improving industrial and market structures and attracting foreign investment and capital, which is one of the major reasons for privatization, can attract modern technology, including environmentally friendly technology. One example is water treatment technology for the privatization or expansion of water supplies. However, it can also bring in foreign capital to participate in projects, for example mining or large-scale irrigation, which can lead to environmental damage unless such activities are properly managed environmentally.

7. Further, where privatization succeeds in creating competitive market structures, the environment itself can become an instrument of competition. This is happening in a number of developed countries, but developing countries too can get into the act, for example by developing environmentally sound natural resource-based industries. In developed countries, there is evidence that companies in competitive markets, with an eye to increased environmental consciousness on the part of consumers and under pressure of environmental lobbies and regulations, are themselves looking for ways to improve their "green" image through environmental reporting and through the development of environmentally sound products in terms of improved energy efficiency or of reduced pollution in order to stay ahead of their competitors or to maintain market shares. Examples include electricity-driven cars, phosphate-free detergents and mercury-free batteries. Some companies in developed countries have also been able develop new export markets, for example for the environmentally friendly water treatment technology referred to earlier.

8. Competitive markets are also necessary if market-based instruments for environmental regulation are to work. Such instruments, because they rely on market forces and the competitive drive, may be more efficient than command and control mechanisms which are usually seen as an imposition. By reducing subsidies and introducing environmental taxation, they also have a number of fiscal advantages. One such market-based mechanism is a system of tradeable emission permits. In this regard, reference may be made to the market-based programme to clean up urban air pollution, which was introduced recently in Southern California. Under the programme, known as the Regional Clean Air Incentives Market (RECLAIM), industrial enterprises in four Los Angeles area counties are allocated an annual pollution limit and then granted the freedom to choose the cheapest way to achieve it. Companies that succeed in cutting their emission levels in relation to their limits can sell the excess credits for whatever price they can fetch, thus giving them an incentive to reduce pollution. 6/

9. Privatization, by forcing a privatized electricity company, for example, to charge consumers the real costs of production, can also help to reduce wasteful consumption and pollution due to underpricing. The latter may be due to historical reasons or to the fact that no conscious effort has been made to calculate the real economic costs until it is decided to privatize or to invest in new capacity because of supply shortages, as has occurred in some developing countries. The costs of inadequate supply, when translated into macroeconomic constraints to growth, may be much higher than the costs of generation and supply. If subsidies are to be provided, for example for particular social groups such as rural populations, that can be done in an explicit and transparent manner on the basis of the real costs.

10. In the commodity sector of developing countries, privatization and its benefits are closely related to the need to provide incentives for the economic agents involved to use the resources and to provide their goods and services in a sustainable way. The issue is of relevance both in agriculture, where the resources are renewable, and in the mining sector, where the resources are non-renewable. 7/ In many instances, the issue is closely related to property rights which do not exist or are not well defined, thus creating large externalities. In that situation, the market pricing mechanism does not reflect the environmental value of natural resources for the society as a whole. For example, there are cases where the absence of land titles has created a situation of open access goods and, thus, the farmers and other economic agents operate only in the context of their private costs and of their profit objectives, in disregard of conservation and other environmental objectives. In these cases, securing the land titles, in combination with other policy instruments, can improve significantly the way the resources are used. 8/

11. The Norwegian paper also takes up the relationship of privatization to growth (including the growth of consumption) and of the latter to the environment. The relationship will need further research and empirical verification, particularly as the efficiency gains of privatization would need to be disaggregated by different groups of countries according to their income levels. The paper makes the important point that "most success stories (of privatization) are from industrialized countries and middle-income developing countries (and that) it is more difficult to implement effective privatization

processes in poor countries, although there is sporadic evidence of positive results". Taking this as a starting point, it would seem appropriate to compare economic gains from privatization and other economic reforms with the environmental consequences of stronger economic growth in different groups of countries - industrialized, transitional-economy, middle-income and low-income developing countries. The answers from such studies will shed more light on the relationship of privatization to growth and the environment.

12. As regards the question of regulationary capacity to promote competition and to deal with market failures that lead to environmental problems, there may be a positive correlation between those developing countries undertaking successful privatizations and their competitive market structures and regulatory capacity. Further, how growth will affect the environment depends not only on growth itself but also on the quality of growth. To the extent that privatization leads to efficient industries and competitive market structures, so that competition and market-based instruments of environmental regulation can operate effectively, privatization can lead to increased economic and ecological efficiency, and thus to a higher environmental quality of growth. Thus, the issue raised is an important one, but needs to be further researched so that proper conclusions can be drawn that can contribute to action for the achievement of the objective of sustainable development, including in the areas of financial, technological, technical and other forms of cooperation.

C. Environmental management of privatization

13. The environmental management of privatization is an important part of the process of privatization. It deals with a number of important issues, including the environmental record and liabilities of public enterprises, the question of environment audits for such enterprises, how such liabilities can affect banks and other creditors and the extent to which the State should take over such liabilities when privatizing them; the elaboration of environmental policies and instruments and how such policies may be integrated with privatization policies; the issues of infrastructure and of environmentally sensitive sectors and the use of environment impact assessments; and the establishment of environmental standards and instruments of environmental regulation, as well as the role of the State in environmental regulation.

14. When public enterprises have a poor environmental record or are seen to have environmental liabilities, private investors may be reluctant to get involved lest they should end up with a large bill to clean up the environmental damage. Thus, potential liabilities for cleaning up soil contamination, together with uncertainties about emission standards, are known to have discouraged foreign investors in Eastern and Central Europe. Their transfer to the private sector, with their environmental liabilities or potential liabilities intact, may also have undesirable effects on the banking system to the extent that they have major loans with the banks. In such a situation, the State may have to absorb the environmental liabilities in order to be able to sell the enterprises. For example, in the eastern part of Germany, the policy of the Treuhandanstalt is to absorb some 90 per cent of the environmental burdens of privatized enterprises. For the potential buyers and the creditor banks, an environmental audit may also be necessary in order to establish what the true environmental liabilities are.

15. In order to take into account the environmental implications of privatization projects, and to provide for environmental regulation, environmental policies and instruments are needed. Further, environmental policies may need to be integrated into the privatization process, particularly in the case of the privatization of public utilities and of environmentally sensitive sectors such as chemicals or chemicals-based, extractive mining and forestry. Such integration will ensure that privatizations are evaluated from an environmental perspective and that an environment impact assessment can be made at the beginning of the privatization process. In Jamaica, for example, environmental concerns and standards are increasingly becoming an important part of privatization projects. Thus, where such projects involve major environmental considerations, one of the criteria used in the assessment of a proposal is whether it includes measures to ensure that the privatized company operates, as far as possible, in an environmentally friendly manner. For example, where projects have a large chemical or waste content (as in a textile or distillery factory), an environmental impact assessment is undertaken in order to identify the problems with regard to the company's operations and to propose possible solutions. In addition, the Natural Resources Conservation Authority, a government agency, ensures that companies operate in conformity with good environmental practices and that privatizations incorporate such practices.

16. Coordinating or consultative mechanisms may also be established in order to facilitate the integration of environmental policies into privatization projects. In Poland, for example, an inter-Ministerial Environmental Unit has been established to deal with environmental issues arising from the privatization process, particularly those relating to liability and compliance. Among its principal objectives are to evaluate and propose relevant legislation and regulations, to obtain the necessary environmental data on companies to be privatized, to oversee environmental audits and to monitor the buyers' contractual obligations concerning the environment.

17. The privatization of public utilities and of environmentally sensitive sectors deserve particular attention. In the case of public utilities, which are "natural monopolies" or which have monopoly sectors, environmental regulation is closely linked to economic regulation. For example, pollution control in electricity generation or in the disposal of sewage and waste water is part of environmental regulation. But it can also be part of price regulation designed not only to protect consumer welfare but also to provide an incentive for investment in environmentally sound technology.

18. Infrastructure facilities or projects which have important environmental implications need environmental impact assessments. Such assessments are in fact done routinely by the multilateral financial institutions for such projects financed by them. However, in practice, the costs and delays associated with detailed environmental assessments, together with problems with land use and compensation, can act as obstacles to the private development of such projects. 9/ In the United States, for example, infrastructure facilities must undergo a rigorous process to meet environmental requirements before construction can begin. This increases project costs and risks and may discourage private investment. However, the costs related to environmental assessments are the internalization of external

environmental costs, which make it all the more important that environment impact assessments should be made for such projects from the point of view of sound environmental management.

19. In the case of the private development of infrastructure projects such as roads and tunnels, the State and the private investor may also have conflicting objectives, with significant implications for the environment. For the State, while it will want to reduce the volume of traffic, it is in its interest to use a high estimate of traffic in negotiations in order to boost the project's profitability. For the private investor, while it will want a high volume of traffic in order to maximize the toll earnings, it is in its interest to use a low estimate in order to push for high toll rates.

20. Likewise, environmental objectives and policies will need to be taken into account explicitly in the privatization of environmentally sensitive industries operating in competitive markets. An environment impact assessment will be needed for each major privatization with important environmental implications. Such an assessment may also include international dimensions, including foreign direct investment and environmentally sound technology. In such a situation, market-based instruments or incentives can be used as a form of environmental regulation or of internalization of environmental costs, including taxes. Environmental standards will need to be established and procedures defined for their enforcement. For air polluting industries operating in competitive markets, tradeable emission permits may also be used.

21. Where the market is competitive, environmental regulation by market-based instruments such as taxes may be more effective than command and control mechanisms, which involve direct regulation by the State. However, whichever method is used, an efficient public sector is needed in order to devise and implement appropriate environmental policy instruments, including standards setting and monitoring of their compliance.

D. Concluding observations

22. Privatization, by contributing to industrial restructuring, competitive market structures and economic efficiency, can contribute to ecological efficiency. It can do so by helping to reduce wasteful consumption and to improve access to capital and new technologies, including environmentally sound technology. By contributing to competitive market structures, privatization also contributes to market-based mechanisms as a form of environmental regulation and to market-based incentives for the development of environmentally friendly production processes and products. Under competitive market conditions and under the pressure of environmental concerns, the environment can become an instrument of competition. Market-based instruments may be more efficient than command and control mechanisms as tools of environmental regulation. Whatever methods are used, an efficient public sector is needed for formulating environmental policies and standards and for monitoring their compliance. Environmental policies need to be linked more explicitly to the privatization process at an early stage, particularly for the privatization of infrastructure and environmentally sensitive sectors, for which environment impact assessments may be needed. Economic regulation is needed for monopolistic sectors; environmental regulation may be linked to it in such sectors.

II. PRIVATIZATION OF PENSION FUNDS

A. Introduction

23. The drive towards reform of State pension systems has been spurred by various factors. In the developed countries, the major concern has been the increasing gaps between contributions and payments due to demographic factors (lower support ratio of working-age to retired age people), the design and structure of the pension systems themselves (leading to over generous defined benefits in relation to the contributions), the effects of the recession on employment, fraud and the use of pension fund reserves for financing fiscal deficits rather than future pension liabilities. Some of these problems have also arisen in some developing countries. In some other developing countries, however, the major concern has been to extend social insurance in terms of increasing both the level of pension benefits and the population and contingency coverage. These different concerns have led to different types of reforms. While some developing countries, such as Chile, have moved from pay-as-you-go systems (PAYG) to privately-managed individual capitalization schemes, other developing countries like Ghana have moved in the opposite direction, from State administered individual capitalization schemes (national employee provident funds) to PAYG-based social insurance systems.

24. In addition to actuarial and financial reasons, pension fund reform in terms of the introduction of individual capitalization schemes has been driven by the consideration to use such schemes to raise savings and create additional institutional sources of finance for the strengthening of corporate capital and domestic capital markets. This would seem to be one of the objectives behind the Chilean reform introduced in 1981, which is regarded as the first privatization of State pension systems of its kind and which led to the pension funds playing an important role in the privatization and capitalization of a number of large-scale enterprises during the 1985-1988 privatization programme in Chile. France is reportedly preparing to introduce a private pension fund plan, as a complement to the State PAYG system, with the objective of mobilizing private savings for the bolstering of corporate capital and domestic capital markets and thus of facilitating the implementation of its ambitious privatization programme. 10/

25. The following sections will discuss a number of issues relating to the privatization of State pension systems, with particular reference to the Chilean experience. The Chilean reform is the first full-scale privatization of its kind, with more than 12 years of experience behind it and on which numerous studies have been made. The issues to be discussed include: the nature of the reform in Chile and its implications; competition and regulation: the effects of capitalization schemes on savings; and the role of financial and other reforms. 11/

B. Nature of the reform

26. Chile has opted for an individually capitalized system, based on mandatory contributions by employees only of 10 per cent of their base salaries which are paid into individually-owned pension accounts, until the age of 65 for men and 60 for women. The State guarantees, by means of a special contribution to individual pension accounts, a minimum pension,

currently about 85 per cent of the minimum wage, but only for those pension fund participants with at least twenty years of contributions to their accounts. (There is also a basic (safety net) pension provided by the State for those who are unable to accumulate funds for a pension, but the number of beneficiaries is limited to 300,000 per year.) Pensions, as well as invalidity and survivor's benefits and severance allowances (for which employees pay an additional contribution of 2.5 to 3.7 per cent of their salaries towards a group insurance policy), are separated from other components of social security. Family allowances and sickness, maternity, work injury and unemployment benefits are now covered under separate social security or insurance schemes sponsored by the Government but with different degrees of private sector involvement. The advantages claimed for such a separation is that it avoids the use of pension contributions for purposes other than the payment of pension benefits. Further, the reform avoids the need to revise periodically the contributions, as is needed in a defined benefits system in order to take account of demographic changes or the effects of the economic cycle on employment. It also shields the pension system from political interference.

27. However, whether the reform is justified in terms of cost efficiency or of its costs and benefits is a matter for further research. It may be noted, in this connection, that the issue of a separate system of individually capitalized pension accounts, which would seem to have a positive effect on savings, needs to be distinguished from that of the administration of the system. Such accounts can be administered by the State through a statutory body. It would thus seem appropriate to make a comparison not only with the old system but also with a publicly-administered individual capitalization scheme, particularly in terms of the administrative costs and of the rates of return on investments.

28. A comparison with the old PAYG system would have to take into account the risks of individual contributors which were previously assumed by the State or by means of mutual insurance or of inter-generational solidarity. Unlike the PAYG system, the current system does not contain elements of mutual insurance or of solidarity, for example between different social groups, between male and female employees or between generations. Such risks include inflation and investment risks, as reflected in real rates of return on investments (although such risks may be offset to the extent that shortfalls in minimum profitability can be covered by the reserve fund) and of retirement income falling below the poverty line for low-income workers. There are, in addition, the risks of mismanagement by the PFAs. Unlike the PAYG system, there are also complexities concerning the life expectancy of the contributor or of the surviving dependents which the contributor will have to cope with when deciding how to convert the accumulated funds into monthly pensions, since the system provides for those who qualify the choice of an indexed annuity, a programmed monthly pension by the PFA or the combination of a programmed pension and a deferred annuity. Contributors qualify when they reach the retirement age or when their accumulated funds are sufficient to permit early retirement, i.e. when such funds can provide a pension with a replacement rate, defined as a percentage of final earnings, of at least 50 per cent. Other things being equal, the use of gender-specific annuity tables would lead to a lower pension for women. Further, since employers do not contribute to the pension fund accounts, the issue of equity also arises.

29. The comparison would also have to take into account the administrative costs for the contributors. These include the commissions charged by Pension Fund Administrations (PFAs). The PFAs, 19 of them in 1992, act as financial agents or intermediaries of the pension accounts which are individually owned by the contributors. (The capitalized contributions are held by a separate entity called the Pension Fund.) The commissions, which vary between PFAs, consist of a flat rate and a rate that is proportional to contributions (2.5 to 3.5 per cent of insured earnings). They have dropped from an average of 5 per cent in 1983 to an average of 3.2 per cent in 1990. In this connection, the question has to be raised as to whether high marketing costs are making the commissions more expensive than they need to be. The administrative costs also include charges levied by insurance companies for converting lump-sum withdrawals into an indexed annuity. Further, because of the complexity of the options, contributors may feel obliged to use the services of an advisor (some 2,000 of them) to advise them on the choice, which would mean an additional cost.

30. In the final analysis, the success of the reforms will depend on the performance of the pension funds, as measured by the real rates of return on their investments and the level of benefits provided. The real rates of return averaged 15.4 per cent during the period 1981-1991, and 11.2 per cent during 1987-1992, with the rate falling to nearly zero in 1992. However, such rates may not be sustainable in the long run. As far as pension benefits are concerned, they depend on the contributions and their capitalization rate. Actuarial calculations indicate that, for men retiring at 65 and women at 60 after a full working life and contributing continuously 10 per cent of their earnings, an annual real rate of return of at least 5 per cent would be needed to secure a 100 per cent replacement rate. The rate would drop to 4 per cent for a 75 per cent replacement rate, 3 per cent for a 44 per cent replacement rate and so on. However, figures show that, while there were 4.1 million members affiliated to the new system in December 1991 (85.6 per cent of the total labour force), only 2.5 million of them (51.8 per cent of the total labour force) were contributors. This discrepancy may be explained by a number of factors such as loss of jobs, lack of incentives, late payment by employers of the employee contributions collected by them and a high proportion of independent, informal workers, together with a high incidence of poverty. All this raises the issue of what may be done in order to lock in the contributions. Unless that is done, the profile of contributors suggests that an important proportion of the members will end up with acquired benefits less than the guaranteed minimum. And the State would need to incur additional liabilities for those with a qualifying period of contributions.

31. It has been estimated that the average old-age pensions paid by the new system for fully paid-up contributions up to age 65 exceed the corresponding pensions under the old system by 40 per cent. However, only 1.1 per cent of the contributors, i.e. among those who have been transferred from the old system under very favourable conditions, have reached retirement age in 1990 and received such benefits. For this reason and for the reasons stated above concerning the contributions profile and the future evolution of real rates of return on investments, no general or firm conclusions can be drawn from this comparison.

32. The State continues to bear certain costs, including the cost of maintaining the old system for those who chose not to transfer to the new system (covering 8.5 per cent of the total labour force), providing "recognition bonds" to those who chose to transfer to the new system (with a capitalization rate of 4 per cent and a replacement rate of 80 per cent), and of guaranteeing a minimum pension for those with a qualifying period of contributions. The cost of the transitional measures is estimated at 4.8 per cent of GDP in 1992, although its share of GDP is projected to be halved by the year 2010. The continuing financial burden is having an important negative impact on health services. Further, to the extent that 50 per cent of the resources of insurance companies are invested in Government indexed bonds, the State bears also a part of the responsibility for the indexed annuities of the insurance companies. In the final analysis, the State must also assume any risk of failure of pension funds and of associated insurance companies. Just as in 1983, after the capital market crisis of 1982 had led to the bankruptcies of a number of newly privatized banks, the Government renationalized the banks (which were subsequently sold back to the private sector), it would be inconceivable that the Government would not come to the rescue of a failing PFA or insurance company. Even if the risk is minimal, because of the regulations governing their operations, the argument is still valid. In fact, the question may be asked as to whether the reform undertaken was privatization in the strict sense of a complete transfer of risks to the private sector. This being said, it is doubtful whether the transfer of risks in the context of the privatization of financial sectors, for political and social reasons, can ever be absolute.

C. Competition and regulation

33. Competition among the PFAs in terms of quality of service, commissions charged and rates of return on investments, is fostered by allowing contributors to switch freely from one PFA to another. There is no limit on foreign ownership, and the four largest PFAs are foreign-owned. However, the market is dominated by the three largest PFAs which between them currently control 67.5 per cent of the market, as against 73 per cent in 1981. This market domination by the three PFAs has raised the question as to whether some industrial reorganization may be needed.

34. The system is regulated by the Government, but mainly on the investment side. Contributors are protected through the establishment of diversification requirements, which are much stricter than those applied to investment or mutual funds, and of a risk classification system. The regulations ensure that: pension funds can only be invested in legally authorized financial instruments to be evaluated and approved by the National Risk Classification Commission; portfolio diversification is subject to limits on investments in instruments issued by the same sources and on the types of instruments to be held; the value of all pension fund instruments is adjusted daily in accordance with prices established by the supervisory authority and periodic reports are issued to contributors; a minimum return is earned on the pension fund investments (a mandatory reserve has been created, equal to 1 per cent of the Pension Fund, to meet any shortfalls in minimum profitability up to the 1 per cent coverage); and at least 90 per cent of the financial instruments of the pension funds are deposited with the Central Bank.

35. The Risk Classification Commission includes the representatives of the three supervisory agencies concerned - for the stock exchange, banks and PFAs - and of four PFAs. Initially, the Commission classified the risks of the financial instruments eligible for investment by the PFAs which determine the limits on the amount permitted for investment in each specific instrument. However, the task of the Commission has evolved to one of overseeing the classifications issued by the authorized private institutions.

D. Effects on savings

36. A major argument in favour of individually capitalized pension funds is that they have a positive effect on savings and on real capital formation. This argument has been made with respect to both the positive effect of such pension funds on personal savings and the negative effect of PAYG systems on such savings. The argument in respect of the former is that individuals are myopic concerning their old-age security needs and that a system of capitalization of compulsory savings retained in individually owned pension accounts can help to increase personal savings. (The argument would seem to apply also to collectively capitalized pension funds, as in the Netherlands.) Further, there is evidence, for example from the ECLAC case studies 12/, that the response of voluntary savings to interest rates is poor. Moreover, higher interest rates affect corporate savings negatively, as firms are net borrowers.

37. The other part of the argument concerns the effects of PAYG systems on personal savings. Two reasons have been given in this connection. The first is that such systems, when they were first created, have tended to provide over-generous defined benefits in relation to the contributions and that this has tended to increase consumption spending 13/. The second reason given is that such systems, by guaranteeing old-age security, have a disincentive effect on personal savings 14/.

38. Studies in the United States have shown that pension savings tend to reduce non-pension savings. However, each pension dollar saved tends to reduce non-pension savings by only about 65 cents, so that there is a net increase in savings. Given that preferential tax treatment for private pensions may lower non-pension savings, the net effect may fall to 20 cents to the dollar, assuming that the Government does not raise taxes elsewhere to provide offsetting revenue for the tax breaks 15/.

39. Pension savings in Chile have increased from 1.7 per cent of GDP in 1983 to 3.3 per cent of GDP in 1991. However, other forms of private savings have also increased significantly during the period, from 8.2 per cent of GDP in 1983 to 10.9 per cent of GDP in 1991, lifting total private savings from 9.9 per cent of GDP in 1983 to 14.3 per cent of GDP in 1991. Thus, the share of pension savings in total private savings has increased from 17 per cent in 1983 to 23 per cent in 1991. Aggregate public and private savings have also increased, accounting for 19.2 per cent of GDP in 1991, compared to 7.8 per cent in 1981 and 5.4 per cent in 1983 (following the sharp recession in 1982). However, it is felt that further research is needed before any firm conclusions can be drawn regarding the effect of the reform on aggregate savings. This is because the public sector social security deficit related to the reform, which has a direct effect on public sector savings, is

still affected by the transition from the old pension system to the new one. Further, while pension savings have increased, so have other forms of private savings. And the effects of the reform cannot be easily isolated from those of other factors, including changes in income distribution and in the composition of savings, financial liberalization, balance of payments deregulation and labour market reforms.

E. Financial and other reforms

40. It is worth noting that the pension fund reforms were introduced after other reform measures had been taken to liberalize financial markets, including interest rates, to strengthen public finance through a major reform of the fiscal regime and to reduce inflation. The significant fiscal surplus achieved in 1980 as a result of the reforms made it possible to finance a major part of the fiscal outlay associated with the first phase of the pension fund reform. The liberalization and strengthening of the financial sector made it possible to expect adequate rates of return on investments and a wider spread of financial instruments for the PFAs to diversify their portfolios and reduce risk. Macroeconomic stability also meant that the financial sector could count on long-term investment returns.

41. The capitalized pension funds expanded at an average real annual growth rate of 47.1 per cent from US$ 220 million in 1981 to US$ 10 billion in 1991. At first, investments were concentrated on public debt instruments. This investment policy helped to instil confidence in the system, to alleviate the Government's cash flow problem caused by the reform and to give time to the capital markets, which at the time did not offer many options, to develop. Thus, fortuitously the pension funds were spared the effects of the stock market crash of 1982. The change in policy in 1985 to allow the pension funds to invest in corporate equity coincided with the launching of an ambitious privatization programme involving the privatization of a number of large-scale enterprises. The participation of the pension funds as domestic institutional investors contributed not only to the successful privatization and capitalization of the enterprises but also to the increased capitalization and deepening of the financial markets. The pension funds also helped to generate political support for the large-scale privatizations, including telecommunications, coal and pharmaceutical companies, by showing that they did not only benefit large foreign corporations.

42. As of June 1992, the portfolio composition of the pension funds were as follows: Government securities - 37 per cent; bank deposits and bonds - 10; mortgage securities - 13; company bonds and debentures - 12; and common stocks - 28 per cent. (By comparison, pension fund investments in corporate equities are much higher in the United Kingdom and the United States (70 per cent and 53 per cent respectively in 1989), and less in Japan and the Netherlands (about 15 per cent).) Since PFAs control vast amounts of funds as institutional investors, there is the issue of their influence on corporate governance. Some proposals are still under consideration which would limit their power in electing the board of directors of a company, with opinion being divided on the matter. Those who oppose further regulation believe that the current regulations are sufficient and that the PFAs, in defence of their clients' interests, have every reason to act in the best interest of investors.

43. The rapid growth of the pension funds, from 0.9 per cent of GDP in 1981 to 34.4 per cent of GDP in 1991, has been helped by large inflows of foreign investment, coupled with a significant currency appreciation, strong economic growth of an average annual rate of 6 per cent and a five-fold increase in the real price index of shares during the last seven years. The pension funds are projected to level out at slightly above 100 per cent of GDP by the year 2020. How the domestic capital markets are going to cope, whether they will provide the necessary investment outlets, whether the pension funds will be allowed to diversify further their investments and how all this will affect the rates of return on their investments are questions that need to be posed. Much will depend on the evolution of the economy. The restriction imposed earlier on the PFAs investing overseas has now been partially lifted. How that will affect their investments abroad and how those overseas investments will affect future macroeconomic performance remain to be seen.

F. Concluding observations

44. Pension fund reform is a complex issue. It raises questions which affect the very foundations of the organization of social security. Issues of mutual insurance against the risks of old age, invalidity and death, a social safety net, private provision against such risks, equity and intra- and inter-generational solidarity are involved. Also involved are the costs and benefits of a basic change, including that of the transitional arrangement, which can affect not only the present but also future generations. Improvements in the administration and management of the system can help but they may not be enough. Sometimes, the design and structure of the system itself is to blame. But there are limits to a major overhaul. For example, in Italy it has been estimated that it would require close to a 50 per cent contribution from salaries to balance contributions and payments within 30 years 16/. Thus, there are no easy answers. Not only do conditions differ from one country to another, but both the two basic systems - the defined-benefits collective PAYG-based social insurance and defined-contributions individually capitalized systems - have their own weaknesses. The former has elements of social solidarity, but requires frequent adjustments and may have disincentive effects on savings. The latter promotes savings but has limited population and contingency coverage.

45. There are also many different options in relation to the objectives to be achieved. If the objectives are to provide a minimum pension and a funded system to provide benefits related to earnings - broadly the aims behind the Chilean reform - a number of options are possible. (1) The minimum pension may be universal or subject to a means test. (2) The funded system may be a defined-benefits partially funded or a defined-contributions fully funded one. (3) Fully funded schemes may be voluntary or mandatory. (4) Such schemes may be based on individual or collective capitalization. (5) Funding may be based on contributions by both employers and employees, employers only or employees only. (6) The system may be State-administered or privately managed or may involve combinations of the two.

46. Chile has chosen a privately-managed fully funded system which combines a State safety-net pension limited to a quota of 300,000 beneficiaries, a State-guaranteed minimum pension related to contributions (with a qualifying period of 20 years) and a fully funded scheme based on mandatory contributions

by employees only. By comparison, New Zealand has a very simple system which provides a basic (safety net) pension to all those who qualify. Capitalization of savings is left to private initiative in a savings market that is supervised but not regulated by the State. The ILO has proposed a three-tier system as the most suitable one to meet the basic objectives of pension systems, namely a basic tier providing a fixed-rate minimum pension on a universal or means-tested basis, financed by taxation; a mandatory defined-benefits tier, financed mainly through contributions and operating on a partially-funded basis; and a voluntary complementary defined-contributions tier, based on individual or collective private initiative and operating on a fully funded basis. The second tier may be operated as a "scaled-premium" system, where "equilibrium periods" ranging from 5 to 10 years are defined and where a constant "equilibrium contribution" is calculated for the current period in order to guarantee the actuarial liabilities for that period and to accumulate a reserve for future "equilibrium periods". Since the technical reserves accumulate constantly, the system can have a positive effect on savings. Such a system may be particularly suitable for countries where the economic and demographic evolution has not yet stabilized.

47. The Chilean reform has also been conceived as a means of raising savings, and the figures suggest that it has helped to mobilize savings and accumulate capital. However, the full-scale privatization route or the elaborate system chosen is not the only option. France is reportedly to launch a private pension fund plan for the same purpose, but as a complement to and not as a substitute for the PAYG system. Thus, other than State-administered individually capitalized pension systems, as in Indonesia and Malaysia, a State run partially funded system can be combined with a privately managed fully funded one. Another option still is a State run (second-tier) "scaled-premium" system, combined with private management of its technical reserves. Separate management of the reserves, whether privatized or not, which needs to be properly regulated, would have the advantage of ensuring that the reserves are not used for other purposes, for example the financing of fiscal deficits.

48. The privatization of a pension system raises major issues of political, economic and social significance and cannot be treated in the same way as the privatization of an industrial or trading enterprise. Further, as indicated above, there are other options to full-scale privatization. In any case, even allowing for the fact that the Chilean pension fund reform has achieved its objectives, for example in contributing to the mobilization of savings and capital formation, it does not follow that it can be transplanted elsewhere. The ex ante and ex post conditions in which the Chilean reform was implemented, including well-established financial markets, must be kept in mind. Further, such a sweeping measure will need a full social dialogue and negotiation if it is to be implemented in favourable conditions.

Notes

1/ See "Privatization and the environment: a survey of the main issues with particular focus on developing countries" (TD/B/WG.3/Misc.39), November 1993.

2/ See also Privatization: The Lessons of Experience, World Bank, 1992.

3/ See "The effect of the internalization of external costs on sustainable development" (TD/B/40(2):6), January 1994.

4/ See 2 above.

5/ D. Wheeler: "Enterprise ownership and pollution" (draft) World Bank discussion paper, 1993.

6/ International Herald Tribune, 29 December 1993.

7/ For a discussion on some of the issues related to property rights (i.e. State vs. private ownership) see, for example, "Fostering sustainable development in the commodities field, experiences concerning environmental effects of commodities production and processing: synthesis of case studies on cocoa, coffee and rice", report by the UNCTAD secretariat (TD/CN.1/15), 22 September 1992; "Fostering sustainable development: mineral resources and sustainable development", report by the UNCTAD secretariat (TD/B/CN.1/16), 27 September 1992; "The links between market conditions, intensity of resource use and environmental impact: the case of mining", I.M. McKendry (UNCTAD/COM/11), 16 September 1992.

8/ In Thailand, the establishment of secure land titles, the cost of which was only around 10 per cent of the potential benefits proved to improve significantly the environmental management of the resources involved at an acceptable price. See Panayotou, T. (1993) quoted in TD/B/40(2), .. January 1994 (item 3 above).

9/ See Infrastructure policies for the 1990s, OECD, 1993.

10/ International Herald Tribune, 30 December 1993.

11/ For general references on the Chilean experience, see inter alia articles by: Mr. Andras W. Uthoff, based on case studies undertaken under various UNDP/ECLAC projects and entitled "Pension system reforms and savings in Latin American and Caribbean countries with special reference to Chile", published in an ECLAC/UNCTAD/UNU/WIDER publication entitled Finance and the Real Economy, Santiago, September 1993; Messrs. Colin Gillion and Alejandro Bonilla entitled "Analysis of a national private pension scheme: The case of Chile", International Labour Review, vol. 131, 1992, No. 2; and Mr. Luis A. Larrain, "A bold step in Chile's reforms: privatization of the pension system", Economic Reform Today, Spring 1993.

12/ Uthoff, 1993: See 2 above.

13/ Feldstein, "Social security, induced retirement and aggregate capital accumulation", Journal of Political Economy, vol. 82, No. 5, September-October 1974.

14/ Hubbard, "Uncertain lifetimes, pensions and individual saving", Issues in Pension Economics", University of Chicago Press, Chicago, 1987.

15/ Munnell, The Economics of Private Pensions, Brookings Institution, Washington, D.C., 1982.

16/ Financial Times, 31 December 1993.